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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,756	12/21/2005	Richard E Musty	H0664.70032US00	1614
23628 7590 09/01/2010 WOLF GREENFIELD & SACKS, P.C. 600 ATLANTIC AVENUE BOSTON, MA 02210-2206				
EXAMINER				
CLAYTOR, DEIRDRE RENEE				
ART UNIT		PAPER NUMBER		
1627				
MAIL DATE		DELIVERY MODE		
09/01/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,756

Applicant(s)

MUSTY ET AL.

Examiner

Renee Claytor

Art Unit

1627

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14, 18, 19 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14, 18, 19, 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 4/7/2010
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Request for Continued Examination

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/7/2010 has been entered.

Response to Arguments

Applicant's amendments to the claims are sufficient to overcome the 35 USC 112, first paragraph rejection and the rejection is hereby withdrawn.

Applicant's present arguments over the 35 USC 103 rejection over Brooke et al. in view of Travis et al. and Turner et al. In particular, Applicants argue that Brooke et al. makes no comment on the activity of each of the specified ingredient of cannabis and that Brooke does not teach that CBC is useful for treating mood disorders. Applicants argue over Travis that Travis teaches CBC as an antiviral. Further Applicants argue that CBC is not abundant in most mature cannabis plants and provide a reference that teaches that the proportion of CBC in the total cannabinoid fraction decreases with ageing of the plant. Applicants assert that the rejection fails to establish a reason to combine the elements or that the result of the combination was predictable.

In response to the above arguments, it is again point out that Brooke et al. teaches CBC as one of four active ingredients of cannabis and teaches that the medicinal uses of the active ingredients of cannabis include stress and depression. It would be obvious that the four active ingredients listed are used in the medicinal uses listed. The Examiner does not feel that one would not assume that CBC would not be useful in the treatment of stress and depression. Regarding the arguments that CBC is not abundant in most mature cannabis plants, it is noted that this is not a claim limitation. The argument has been previously discussed in which it is recognized that some plants may have differing amounts of CBC, with some having more than others. In many plants, CBC is the second most abundant type. Therefore, it cannot be concluded that CBC is a minor part of all plants and would not be expected to have medicinal properties.

Applicants argue over the 35 USC 103 rejection over Whittle et al. in view of Turner et al. In particular Applicants argue that Whittle et al. does not link any specific cannabinoid to the treatment of depression, and more importantly does not link the use of CBC to the treatment of depression. Applicants argue that because there are at least 66 different cannabinoids that have been isolated from the cannabis plant, one would not assume that merely because a composition comprises cannabis extract does not mean that CBC is useful for treating all disclosed indications for treating a mood disorder. Applicants present the same arguments over Turner as set forth above and those arguments have been addressed.

In response to the above arguments, it is noted that Whittle teaches therapeutic extracts of cannabis, which includes CBC (paragraph 0052). Therefore, Whittle does teach that one of the therapeutic substances of the invention includes CBC and that the extracts taught are useful in the methods of treating depression (paragraph 0056).

Regarding the Double Patenting rejection, Applicant's assert that because the present claims have been amended to recite CBC and the claims of co-pending Application 11/760,364 recite CBG, the two inventions are not obvious because they use two different compounds. This argument is not found persuasive because as stated in the rejection, both applications teach methods of treating a mood disorder with a naturally occurring cannabinoid.

Please see the following modified rejections due to Applicant's amendments.

Claim Rejections – 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 18-19, 25-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Brooke et al. (US Patent 6,328,992) in view of Travis (US Patent 6,541,51) and Turner et al. (J Clin Pharmacol 1981; 21: 283S-291S).

Brooke et al. teach that medicinal uses, such as depression, have been found for the active ingredients of cannabis, including cannabichromenes (meeting the limitation of claim 14; Col. 1, lines 23-33).

Brooke et al. does not teach that the cannabichromene compound is an extract of a cannabis plant that contains greater than or equal to 30% CBC or the route of administration.

Travis teaches pharmaceutical compositions comprised of cannabichromene compounds. Travis further teaches that the composition includes a suitable carrier and routes of administration that encompass claims 19 and 28 (paragraph 0106).

Turner et al. teach that cannabichromene is a crude drug made from cannabis plants and is one of the most abundant naturally occurring cannabinoids (meeting the limitations of claims 18 and 25-27; see Introduction). Turner et al. further teach that THC and CBC are the major cannabinoids in freshly harvested drug-type cannabis material (see page 285S, first full paragraph).

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of the invention, to treat mood disorders such as depression with cannabichromene compounds because of the teachings of Brooke et al. that cannabichromenes are useful in treating such disorders as depression. It would have further been obvious to use the cannabichromene composition taught by Travis and Turner et al. to treat depression, because Travis and Turner et al. teach cannabichromene compositions that are useful as pharmaceutical compositions. One would have been motivated to use the cannabichromene compositions taught by Travis

and Turner et al. to treat depression with a reasonable expectation of success because Brooke et al. teaches that cannabichromenes show medicinal use in treating depression. It would further be obvious that the CBC amount would be higher because of the teachings of Turner that CBC is the major cannabinoid in freshly harvested drug-type cannabis material, which would make the amount of 30% obvious.

Claims 14, 18-19, 25-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Whittle and al. (US Pg/Pub 2005/0042172) in view of Turner et al. (J Clin Pharmacol 1981; 21: 283S-291S).

Whittle et al. teaches therapeutic compositions that are inhaled as a vapour (paragraph 0030) that comprise one or more natural or synthetic cannabinoids, which includes cannabichromene (paragraphs 0049 and 0051). It is further taught that the compositions that contain natural cannabinoids which are derived from cannabis plants (paragraphs 0042, 0043 0053). The compositions are taught to comprise carriers or solvents (paragraph 0072). The compositions are used in methods of treating inflammatory pain particularly that associated with depression (paragraph 0056), in which it is considered that the composition would necessarily be treating depression.

Whittle et al. does not teach that the CBC extract from the cannabis plant contains greater than or equal to 30% CBC of the total cannabinoid content.

Turner et al. teach that cannabichromene is a crude drug made from cannabis plants and is one of the most abundant naturally occurring cannabinoids (meeting the limitations of claims 18 and 25-27; see Introduction). Turner et al. further teach that

THC and CBC are the major cannabinoids in freshly harvested drug-type cannabis material (see page 285S, first full paragraph).

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of the invention, to treat mood disorders such as depression with cannabichromene compounds because of the teachings of Whittle et al. that cannabichromenes are useful in treating such disorders as pain associated with depression. One would have been motivated to use cannabichromene to treat depression with a reasonable expectation of success because Whittle et al. teaches that cannabichromenes show medicinal use in treating pain associated with depression, which would necessarily treat depression. Further, Turner teaches that CBC is one of the most abundant naturally occurring cannabinoids; therefore, it would be obvious that the content of CBC would be higher to treat a mood disorder.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 14, 18-19, 25-28 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 5, 12, 14 of copending Application No. 11/760,364. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications teach methods of treating a mood disorder with a naturally occurring cannabinoid.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

No claims are allowed.

Contact Information

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renee Claytor whose telephone number is (571)272-8394. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Renee Claytor

Application/Control Number: 10/561,756
Art Unit: 1627

Page 10

/SREENI PADMANABHAN/
Supervisory Patent Examiner, Art Unit 1627